

Styposis clausis Levi, 1960
(Arachnida: Araneida: Theridiidae)
from the Sierra Nevada
de Santa Marta (Colombia)
and functional morphology
of its copulatory organs

by

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With 8 figures

ABSTRACT

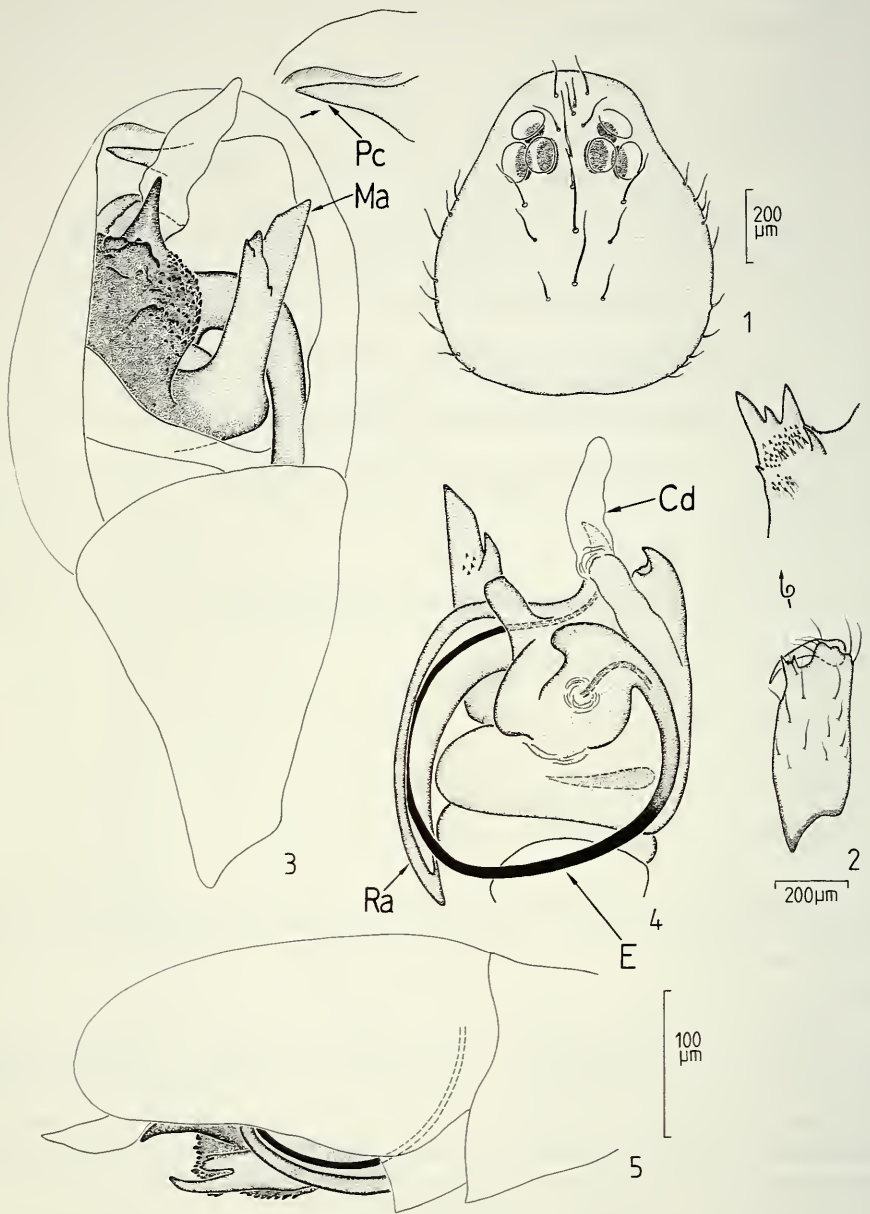
Styposis clausis Levi, 1960 is reported from a bamboo cloud forest in the Sierra Nevada mountains in northern Colombia. An additional description of that species is given, with particular reference to the functional morphology of its copulatory organs.

The theridiid spider genus *Styposis* Simon, 1894 is composed of approximately ten species, almost all of these belonging to the neotropical fauna. Species of *Styposis* generally have the anterior median eyes totally reduced or at least much smaller than the others. The colouration is yellowish or whitish throughout. The discovery of many specimens of *Styposis clausis* Levi, 1960 in the Sierra Nevada de Santa Marta in northern Colombia by the junior author justifies a separate paper because of the uncommon copulatory organs of that species. An additional description of *S. clausis* is also given.

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FIGS 1-5.

Styposis clausis Levi, 1960: 1) ♀, prosoma, dorsal view; 2) ♀, right chelicera anterior view and mediolateral corner in posterior view; 3) ♂ palp, retrolateral view; 4) bulb of ♂ palp, prolateral view; 5) ♂ palp in ventral view. Abbreviations: Cd, Conductor; E, Embolus; Ma, Median apophysis; Pc, Paracymbium; Ra, Radix.

Betin in Santa Marta (INVEMAR/COLCIENCIAS). We are also grateful to Prof. Dr. H. W. Levi, Cambridge, for making available one σ and φ of *S. clausis* from Panama for comparison.

Specimens are deposited in the Muséum d'Histoire naturelle, Genève (MHNG), the Instituto de Investigaciones Marinas de Punta de Betin (INVEMAR), the Museum of Comparative Zoology, Cambridge (MCZ) and in the authors collections.

Styopsis clausis Levi, 1960 (figs 1-8)

1960 *Styopsis clausis* Levi, Psyche, Cambr. 66: 15-17, figs 1-4 (φ).

1964 *Styopsis clausis* Levi, Psyche, Cambr. 71: 36-37, figs 10-12 (σ , φ).

M a t e r i a l : 24 $\sigma\sigma$, 102 $\varphi\varphi$, 42 juv. (Coll. Müller), northern Sierra Nevada de Santa Marta near San Lorenzo, Colombia; bamboo cloud forest, leaf litter, 2250m, 22 August 1985. 11 $\sigma\sigma$, 66 $\varphi\varphi$, 18 juv., deposited as follows: 6 $\sigma\sigma$, 61 $\varphi\varphi$, 18 juv. MHNG; 3 $\sigma\sigma$, 3 $\varphi\varphi$ Coll. Heimer, 2 $\sigma\sigma$, 2 $\varphi\varphi$ MCZ; same locality, 23 August 1985. 6 $\sigma\sigma$, 59 $\varphi\varphi$, 12 juv. (INVEMAR), same locality, 24 August 1985. 1 σ , 5 $\varphi\varphi$, 1 juv. (MHNG), same locality, 20 April 1986.

A d d i t i o n a l d e s c r i p t i o n , σ : Colouration in alcohol. — Prosoma and legs entirely yellowish white, abdomen light grey. Mediodistal corner of chelicerae with tridentate tubercle and, near posterior base of it, with many denticles of different size and a field of about 10 minutes pores. Leg formula I-II-IV-III. Measurements of one σ (mm): Eye sizes and interdistances. — ALE 0.10; PME 0.09; PLE 0.10; ALE-ALE 0.15; PME-PME 0.08; PME-PLE touching; ALE—PLE 0.01; width of anterior eye row 0.22; width of posterior eye row 0.38. Total length 1.55; prosoma 0.78 long, 0.67 wide. Legs:

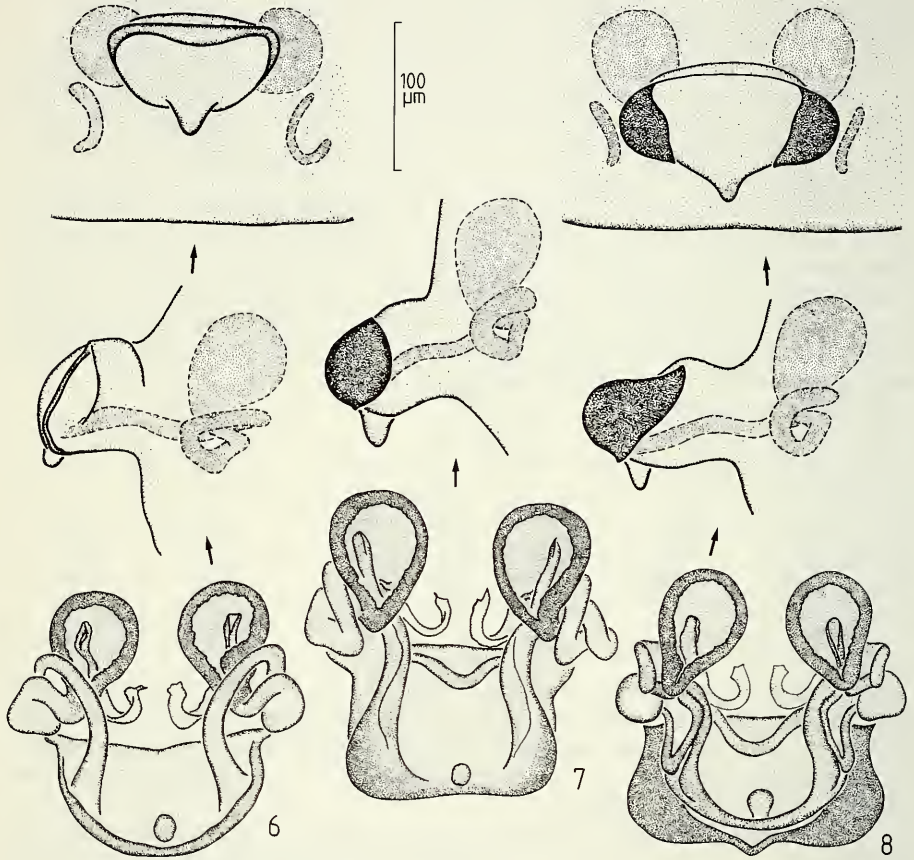
	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
I	1.94	0.34	1.89	1.55	0.63	6.35
II	1.27	0.31	1.05	0.95	0.50	4.08
III	0.84	0.25	0.55	0.58	0.40	2.62
IV	1.13	0.28	0.79	0.69	0.43	3.32

Genital morphology: Embolus long and thin over almost entire length, part of its distal half supported by grooved and curved, shovel-like radix; median apophysis large and bipartite, with denticulate basal part; conductor lamellate, longer than wide, slightly extending beyond distal margin of cymbium; well developed, tooth-shaped paracymbium at distal, inner surface of cymbium.

φ : In general habitus like σ , often somewhat larger. Eye sizes and interdistances quite similar to σ . Measurements of one φ (mm): Total length 2.08; prosoma 0.84 long, 0.75 wide. Legs:

	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
I	1.91	0.39	1.72	1.41	0.58	6.01
II	1.30	0.37	0.95	0.86	0.48	3.96
III	0.89	0.30	0.54	0.60	0.41	2.74
IV	1.23	0.35	0.83	0.72	0.44	3.57

Genital morphology: Epigynum well projected, widened distally; posterior distal margin with scape-like cusp. After hatching to maturity, a progressive sclerotization of the laterodistal margins of the epigynum is supposed, which are hood-shaped (figs 6-8). In almost all vulvae observed, the ducts are located ventrally of the receptacles. However, one specimen could be found where the ducts are situated dorsally of the receptacles (fig. 6).



FIGS 6-8.

Styposis clausis Levi, 1960, ♀: epigynae in ventral and lateral, vulvae in dorsal view with progressive sclerotization, different females. Fig. 6 is from a specimen having the ducts situated dorsally of the receptacles.

Supposed functional morphology of the copulatory organs: The distal cleft of the longer process of the median apophysis is fixed at the paracymbium. The short process of the median apophysis with ventral excavation presses against the posterodistal

epigyneal cusp, while the broad, denticulate base of the median apophysis is pressed against the basal, posterior margin of the epigynum. In that position the embolus is inserted into the ducts.

R e m a r k s : Up to now *S. clausis* was known only from a single ♂ and 3 ♀ ♀ from Panama. In leaf litter of a bamboo cloud forest of the Sierra Nevada in northern Colombia it has been very abundant and present in all samples taken there. None of the specimens was obtained from low vegetation. Males and females have mainly been found sitting under large leaves in an irregular web.

ZUSAMMENFASSUNG

Es wird über *Styposis clausis* Levi, 1960 (Araneida: Theridiidae) aus Nord-Kolumbien berichtet, die bislang nur von wenigen Exemplaren aus Panama bekannt war. Die Art erwies sich als sehr häufig in der Laubschicht eines Bambus-Waldes im Hochgebirge der Sierra Nevada de Santa Marta. Die Morphologie und Funktion der Kopulationsorgane wird dargestellt.

REFERENCES

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— 1964. The American spiders of the genera *Styposis* and *Pholcomma* (Araneae, Theridiidae). *Psyche, Cambr.* 71: 32-39.